

Programming Exercise 4

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Write a C program to list all files whose name matches the filter. Inputs to the program as run time arguments: directory and filename (need to support wildcard)

Example: a.out /home/Ubuntu/abc1.txt

Example: a.out /home/Ubuntu/abc*.txt

Code:

```
#include <stdio.h>
#include <stdlib.h>
#include <dirent.h>
#include <string.h>
#include <fnmatch.h>

int main(int argc, char *argv[]) {
    DIR *dir;
    struct dirent *ent;
    char *dirname, *pattern;
    if (argc != 3) {
        printf("Usage: %s <directory> <filename>\n", argv[0]);
        return 1;
    }
    dirname = argv[1];
    pattern = argv[2];
    dir = opendir(dirname);
    if (dir == NULL) {
        printf("Could not open directory '%s'\n", dirname);
        return 1;
    }
    while ((ent = readdir(dir)) != NULL) {
        if (fnmatch(pattern, ent->d_name, 0) == 0) {
            printf("%s\n", ent->d_name);
        }
    }
    closedir(dir);
    return 0;
}
```

Output:

```
vboxuser@uni:~/Desktop/os$ gcc os4.c
vboxuser@uni:~/Desktop/os$ ./a.out /home/vboxuser/Desktop/os '*.txt'
a1.txt
abc.txt
abc1.txt
vboxuser@uni:~/Desktop/os$
```

